

## K-Shield Dynamax® Combi Impact Bed - IOM

|                           |                                    |
|---------------------------|------------------------------------|
| Kinder Australia product: | K-Shield Dynamax® Combi Impact Bed |
| Product category:         | Belt Support                       |
| Issue date:               | 14.04.22                           |



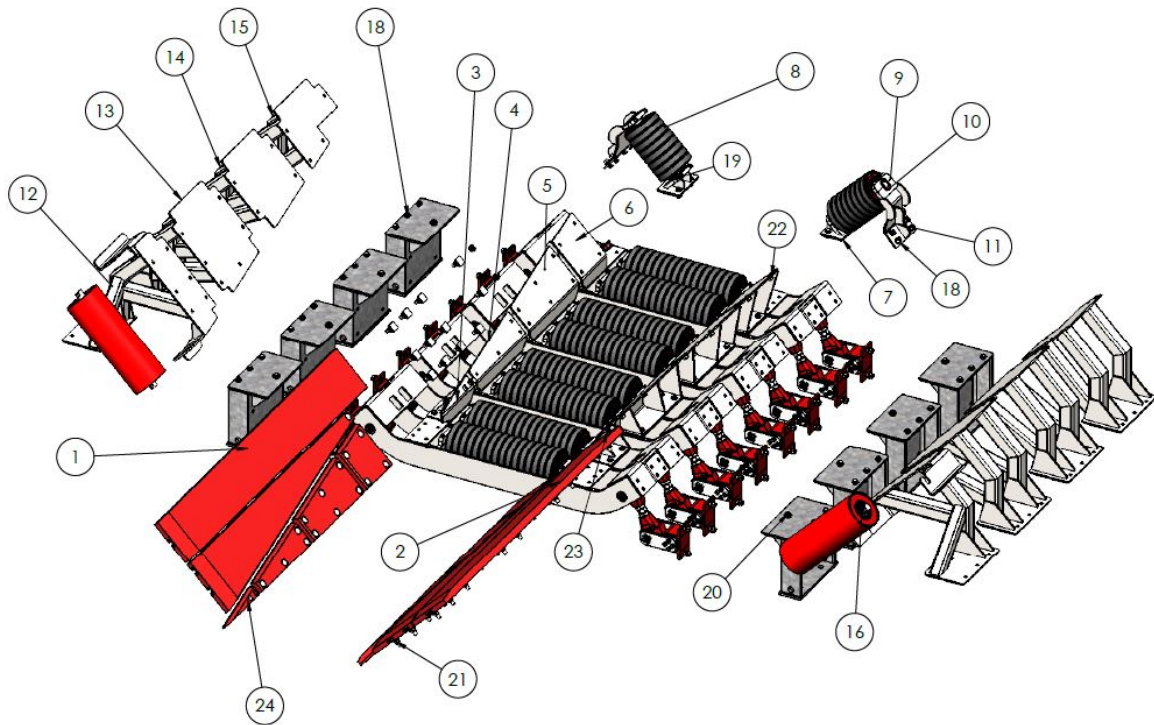
### **⚠ WARNING ⚠**

**Always obey all applicable safety rules.  
Be sure all power to the conveyor has been disconnected and controls are  
locked out.**

#### **Storage instructions:**

**Note:** Product includes Polyurethane parts, these may be susceptible to ozone and water damage. Please ensure assembly is appropriately stored.

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| ITEM NO. | PART                   | DESCRIPTION                              | QTY |
|----------|------------------------|------------------------------------------|-----|
| 1        | Dynamax                | Dynamax dynamic section assembly         | 4   |
| 2        | Slider Rail Kit        | 30mm Slider Rail Kit                     | 1   |
| 3        | Dynamic Wing Stand 1   | Dynamic Wing Stand 1 LH & RH             | 1   |
| 4        | Dynamic Wing Stand 2   | Dynamic Wing Stand 2 LH & RH             | 1   |
| 5        | Dynamic Wing Stand 3   | Dynamic Wing Stand 3 LH & RH             | 1   |
| 6        | Dynamic Wing Stand 4   | Dynamic Wing Stand 4 LH & RH             | 1   |
| 7        | Dynamic Wing Stand 5   | Dynamic Wing Stand 5 (Roller Carrier)    | 2   |
| 8        | Impact Roller          | Impact Roller Ø159x6307 – 250 Face       | 2   |
| 9        | Roller Retainer Cap    | Retaining Cap, suit 6307 Open Slot       | 4   |
| 10       | Roller Support Bush    | Roller Support bush, suit 6307 Open Slot | 4   |
| 11       | Roller Support Bracket | Roller Support Bracket                   | 2   |
| 12       | Static Wing Stand 1    | Static Wing Stand 1 LH & RH              | 1   |

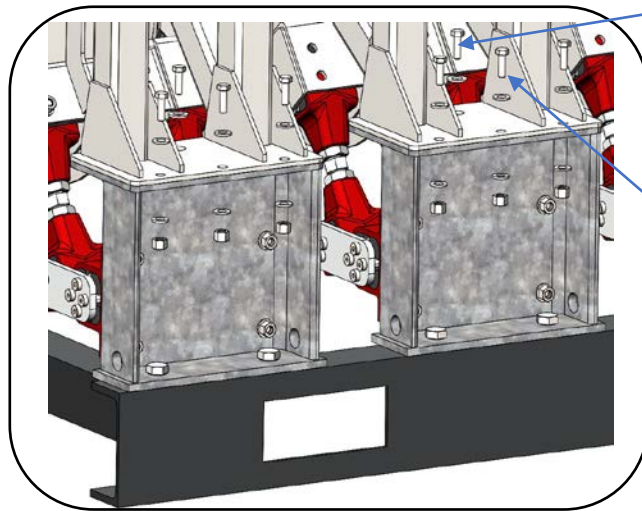
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|    |                       |                                                       |    |
|----|-----------------------|-------------------------------------------------------|----|
| 13 | Static Wing Stand 2   | Static Wing Stand 2 LH & RH                           | 1  |
| 14 | Static Wing Stand 3   | Static Wing Stand 3 LH & RH                           | 1  |
| 15 | Static Wing Stand 4   | Static Wing Stand 4 LH & RH                           | 1  |
| 16 | Steel Roller          | Roller Ø 152, 442 Face, 6306 BRG                      | 2  |
| 17 | M8 Nut                | M8 x 50                                               | 8  |
| 18 | M12 Fastener          | M12 x 40 G8.8 Bolt, 1 Washer, 1 Nut                   | 32 |
| 19 | M12 Fastener          | M12 x 40 G8.8 Bolt, 1 Washer, 1 Nut                   | 38 |
| 20 | M20 Fastener          | M20 x 50 G8.8 Bolt, 1 Washer, 1 Nut                   | 8  |
| 21 | T Bolt M12            | Impact Bar T-Bolt M12 x 40                            | 38 |
| 22 | Coated Bolt-M12       | M12 x 30 UHMWPE Coated Bolt CW Nut and Washer         | 30 |
| 23 | M10 CUP HEAD FASTENER | M10 x 30 Button Socket Head Fastener, 1 Washer, 1 Nut | 4  |
| 24 | Ø21 Cap               | Ø21x19mm UHMWPE CAP                                   | 4  |

**\*If the threads have not been lightly oiled,  
the torque values will be much higher.**

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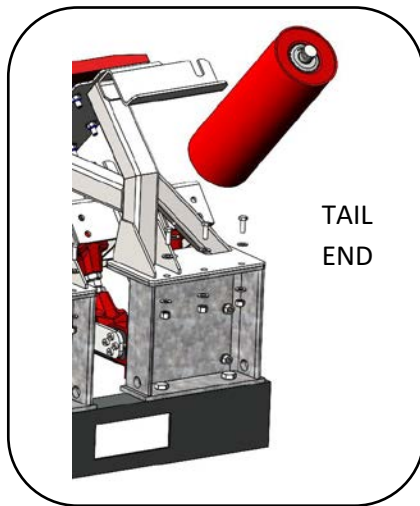
### INSTALLATION STEP 1: M12 and M20 Bolt removal



M20 BOLT

Unbolt M12 and M20 bolts from the static wing stands.

M12 BOLT

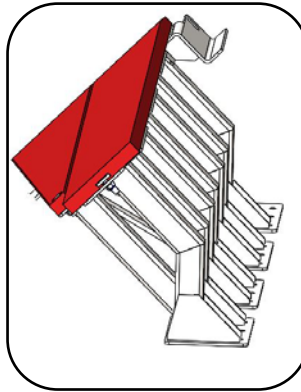
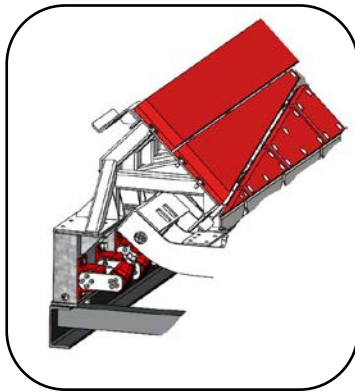


TAIL  
END

Remove both tail end wing rollers from the assembly.

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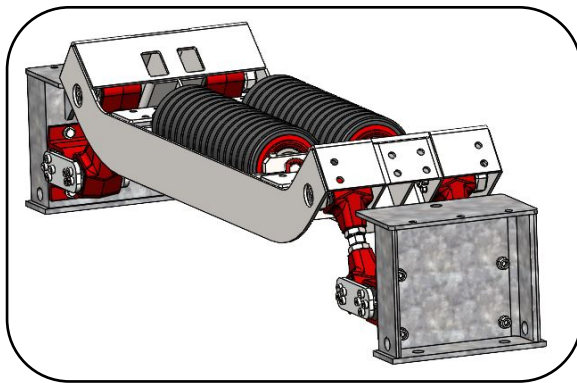
### INSTALLATION STEP 1A: Static Wing Stand Assemblies Removal



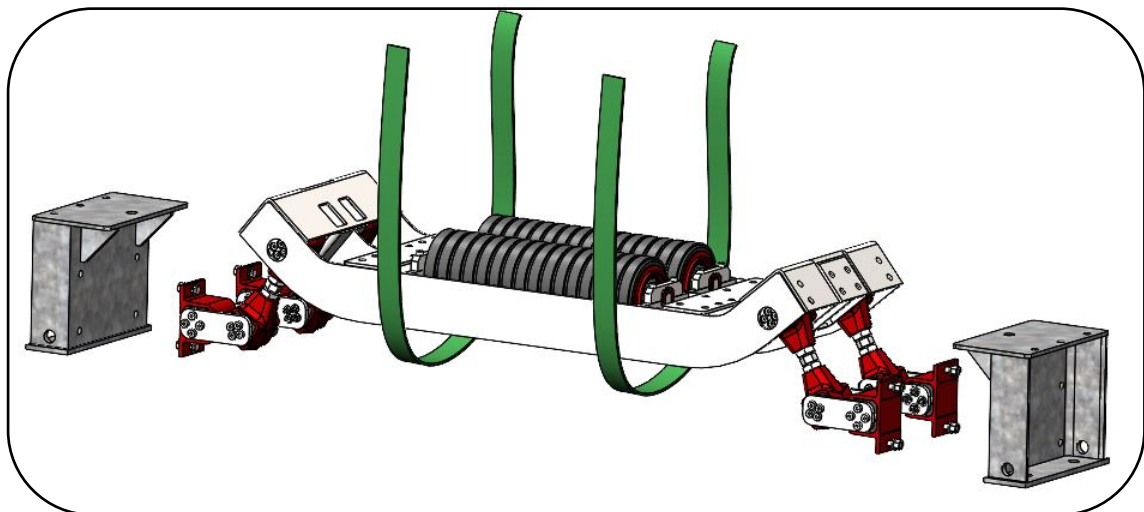
Remove the static wing stand assemblies as one piece. (2 person lift or lifting equipment to be used).



### INSTALLATION STEP 2: Dynamic Section

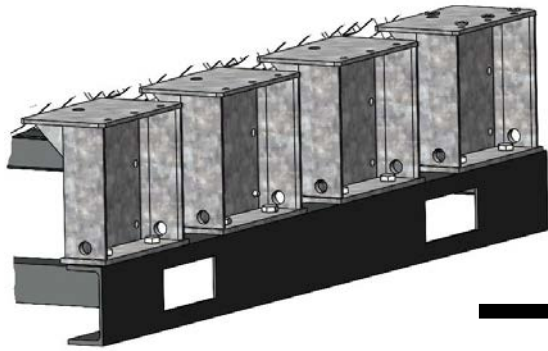


- Support one dynamic section with slings and unbolt the M12 fasteners at the outer most torsion spring from the dynamic idler upright.
- Ensure the spring assembly does not unwind itself, as this will make the jacking screw uneven and possibly unable to achieve a low enough setting height.
- Place these full assemblies aside noting the order in which they sit from the tail end.

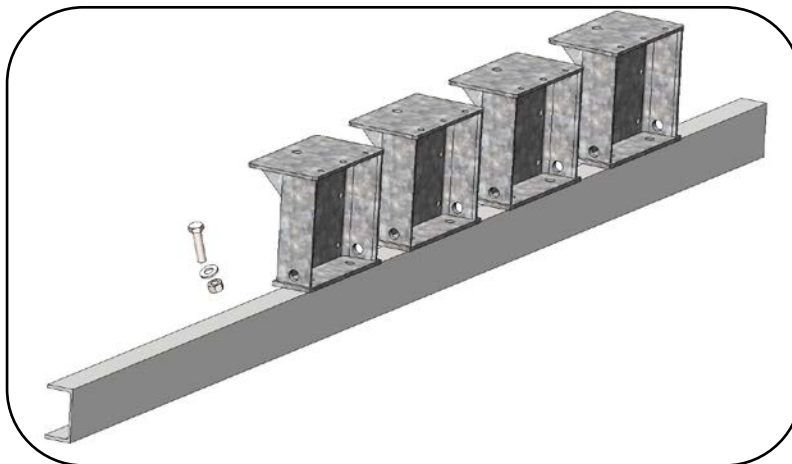
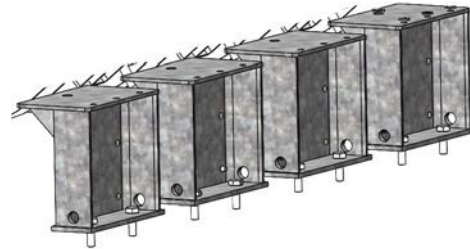


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### INSTALLATION STEP 3: Dynamic Idler Uprights

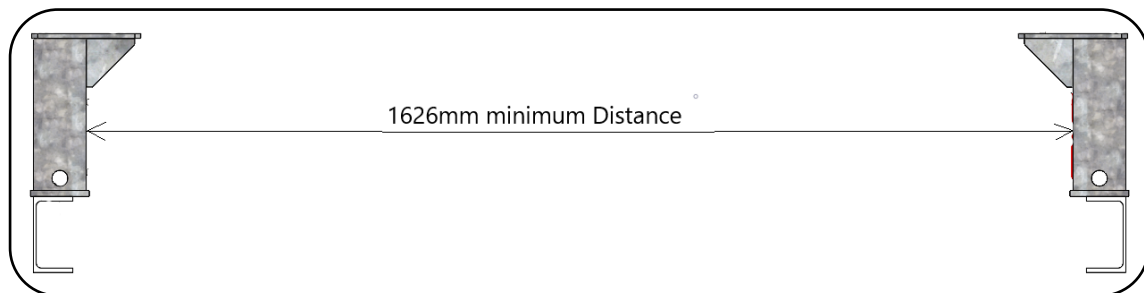


Remove the dynamic idler uprights from the shipping frame and install to the stringers using supplied M20 fasteners with threads lightly oiled.



- Ensure all four sets of dynamic idler uprights are inline and parallel.
- **Torque all M20 bolts to 407Nm.**

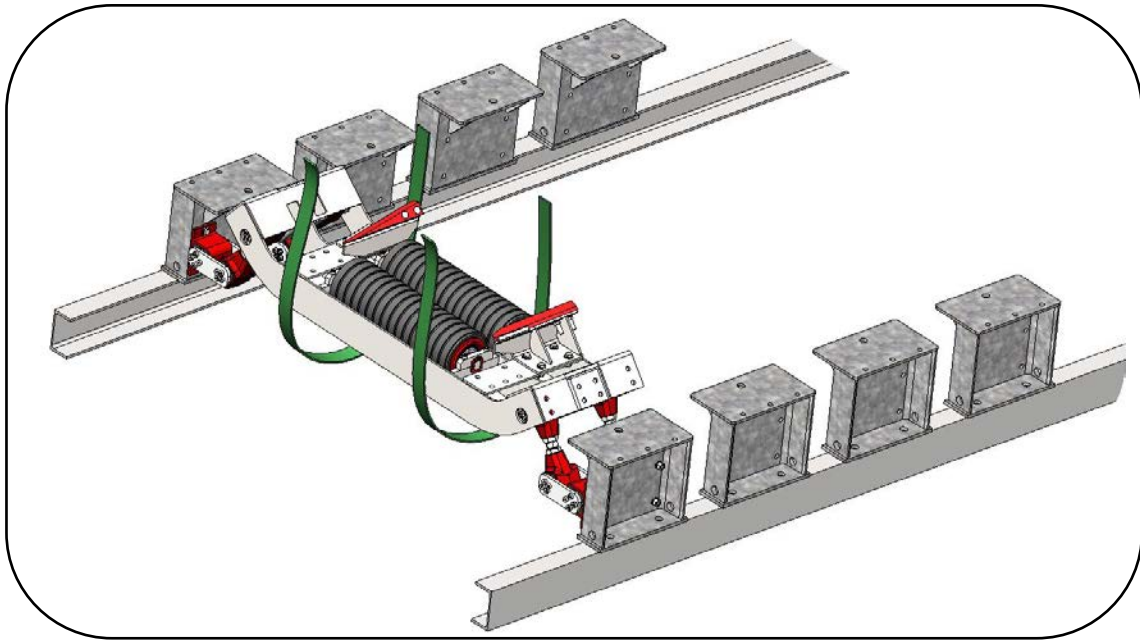
The inside dimension of paired uprights must be a minimum of 1626mm.



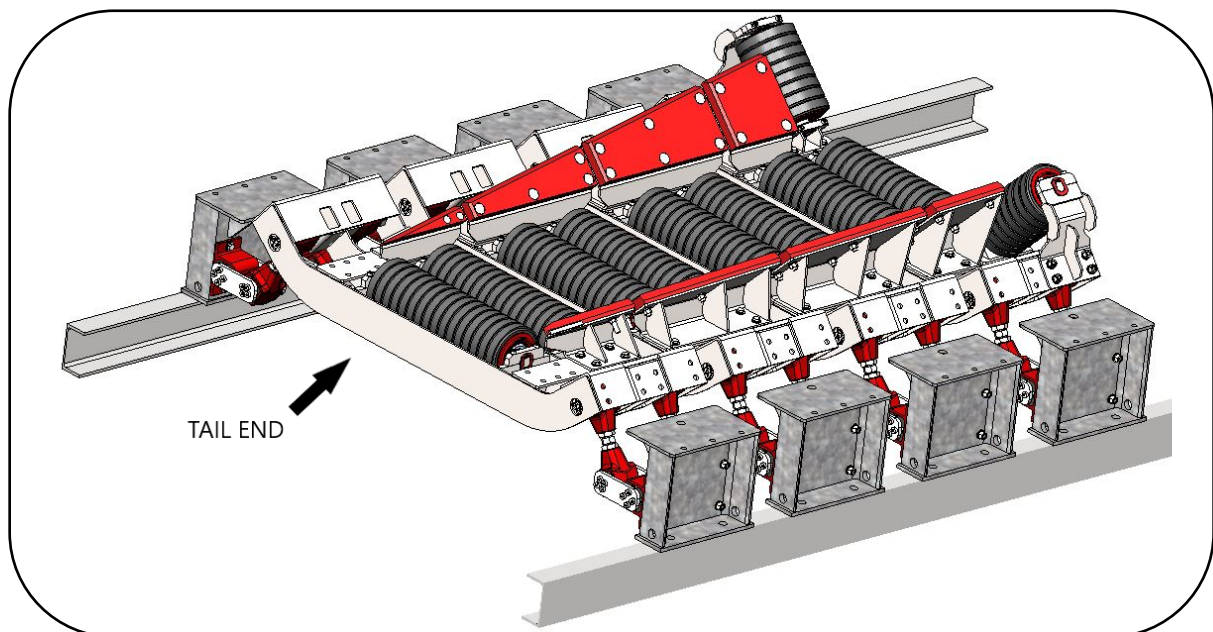
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### INSTALLATION STEP 4: DYNAMIC SECTION INSTALLATION

4a. Sling the dynamic sections into place in order. Lifting slings, chain blocks and M12 lugs have been provided if the below lifting method is not possible due to the chute and/or belt being installed.

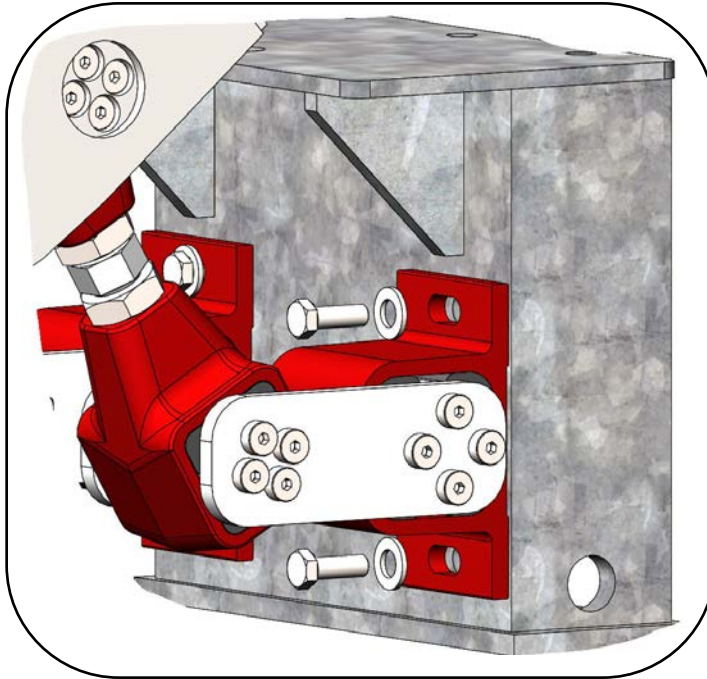


**IMPORTANT!!** Note the order in which the dynamic sections are placed, from the Tail end with the smallest slider rails as shown below:



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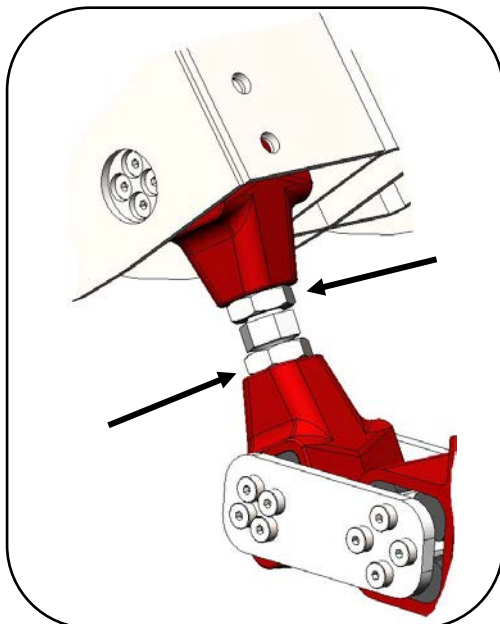
4b.



- Re-attach using the previously removed M12 bolts with lightly oiled threads.
- As the springs are mounted pre-tensioned, once one side is attached, the other side may require a longer M12 thread to pull the outer most torsion spring into place.
- Once the spring is parallel with the upright, **tighten these M12 bolts to 85Nm\***.

### INSTALLATION STEP 4: DYNAMIC SECTION INSTALLATION

4c.

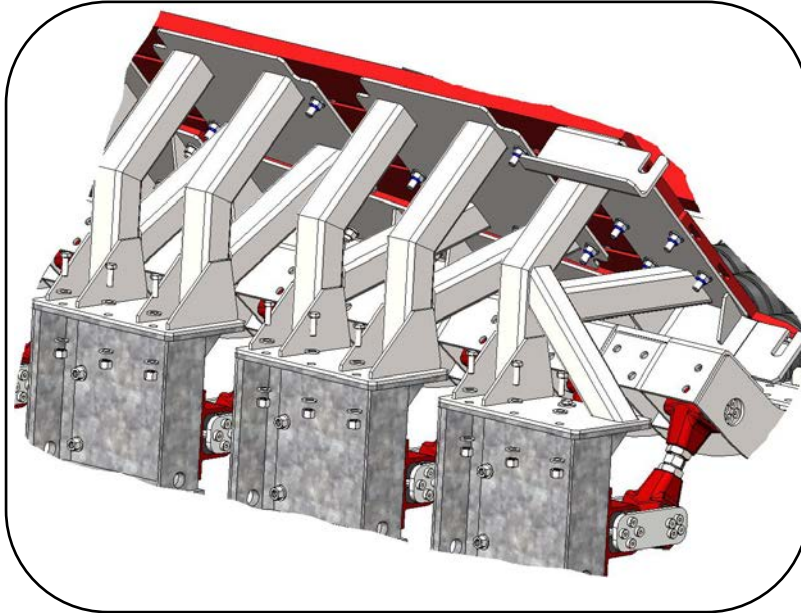


- It is likely that the lowest setting of the torsion spring arrangement will be suitable, given the springs are new.
- Ensure the distance between upper and lower adjustable torsion springs is no less than 43mm, as this may result in steel-on-steel compaction and a locking up of the spring assembly
- Lock the adjustment screw in place by tightening the thin nut against both upper and lower adjustable torsion springs whilst holding the adjustment screw centre.

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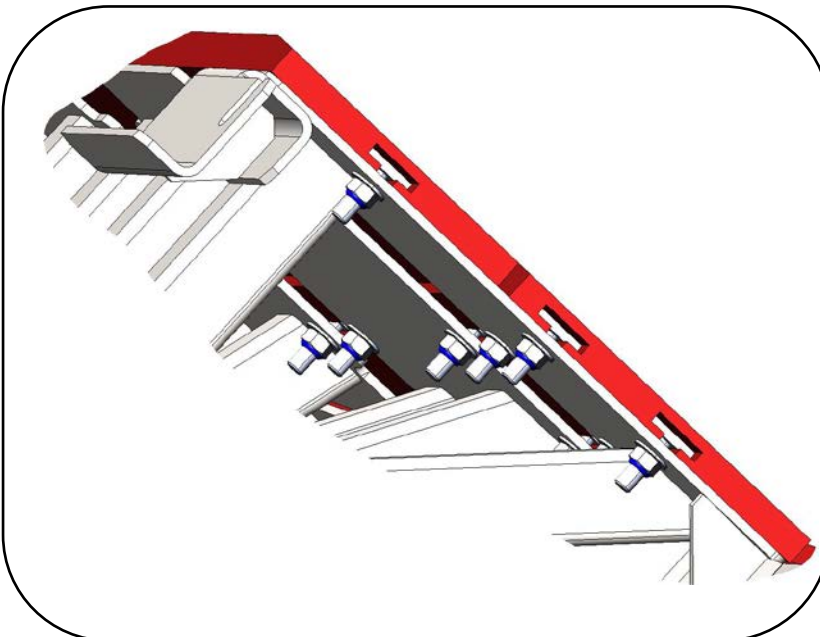
### INSTALLATION STEP 5: STATIC WING STAND INSTALLATION

5a.



Place one static wing stand assembly on the top of the uprights noting the roller carrier sits at the tail end and check the clearance to the dynamic section.

5b.

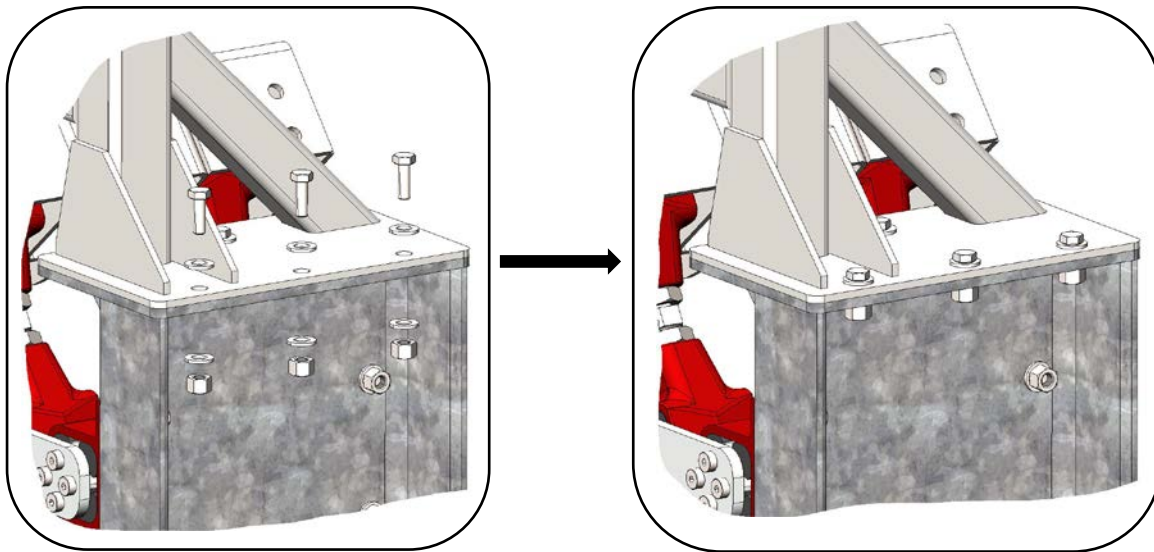


The UHMWPE slider rail bolts on this static section may need to be loosened to allow the static wing stand holes to line up with the upright holes once again.

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5c.

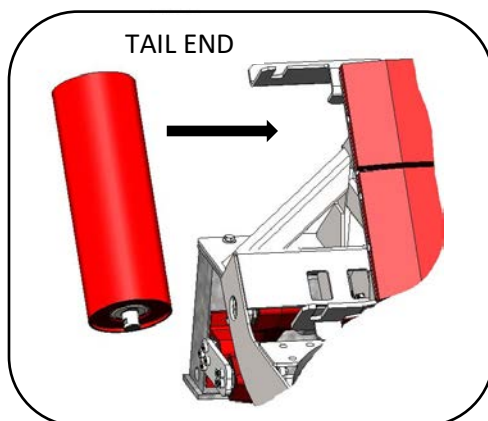
Secure using the M12 & M20 bolts removed earlier. Torque the **M12 fasteners first to 85Nm\***. Then **Torque the M20 fasteners to 407Nm\***. Do the same for the other side static wing assembly.



### INSTALLATION STEP 6: UHMWPE ALIGNMENT

- Check that all UHMWPE slider rails are on the same plane. If the UHMWPE rails could do with some adjustment, the bolts holding the stands in place can be loosened to use the hole clearances to adjust the rail in place.

### INSTALLATION STEP 7: WING ROLLERS

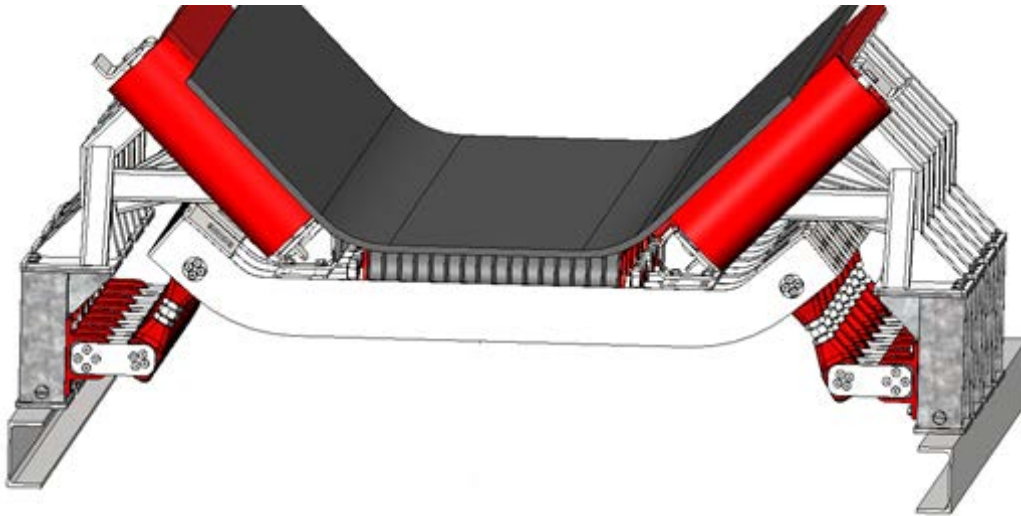


Place lead in tail wing steel rollers from the assembly back into the frame

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### INSTALLATION STEP 8:

- Once the belt is placing weight on the system, re-check the dynamic section height is suitable and hasn't sagged down. This should be monitored upon start-up and daily to ensure the height setting is optimal.



**\*If the threads have not been lightly oiled,  
the torque values will be much higher.**

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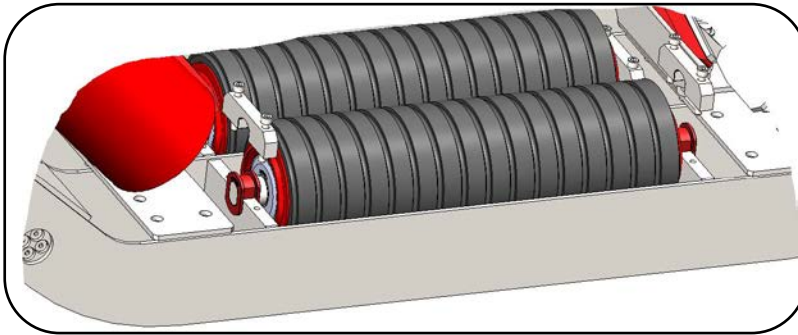
Completed K-Shield Dynamax® Combi Impact Bed and Chute Install:



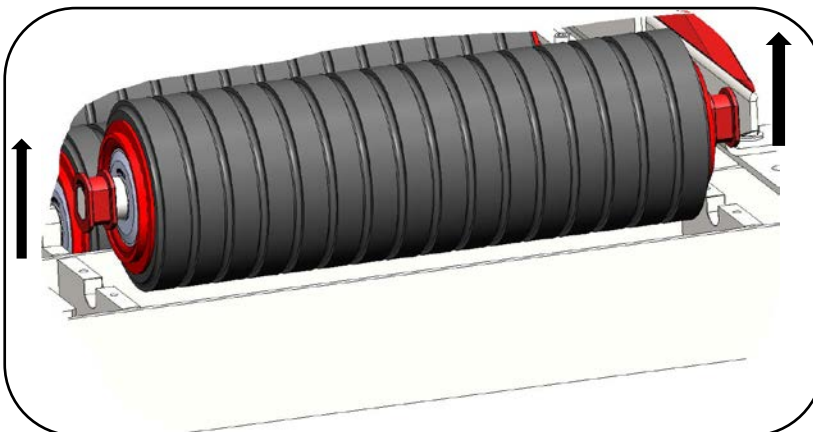
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### MAINTANANCE

- Service and changeout of the rollers, roller bushes and torsion springs can be completed by lowering the dynamic section assembly using sling and/or lever-chain hoist on both sides. This is accomplished by following Installation Steps 1 & 2.
- The Impact Roller and bush removal is done by following the below steps:

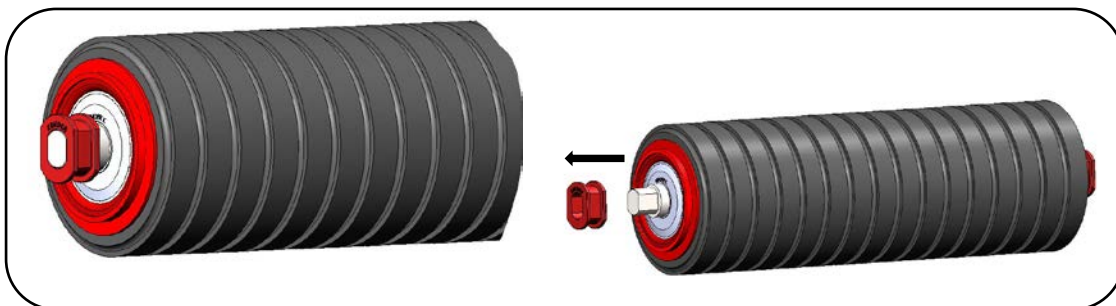


Unscrew the pair of M8 bolts on each side to remove the roller Retainer Cap

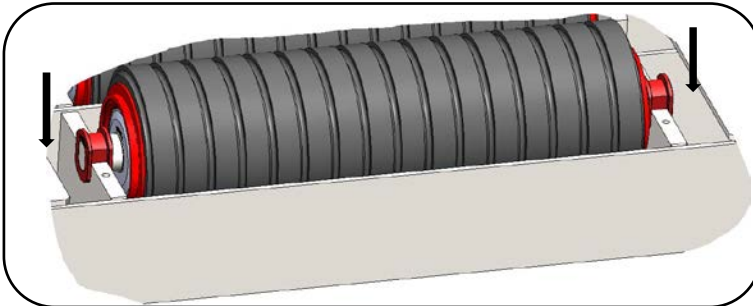


Lift the roller out of the frame

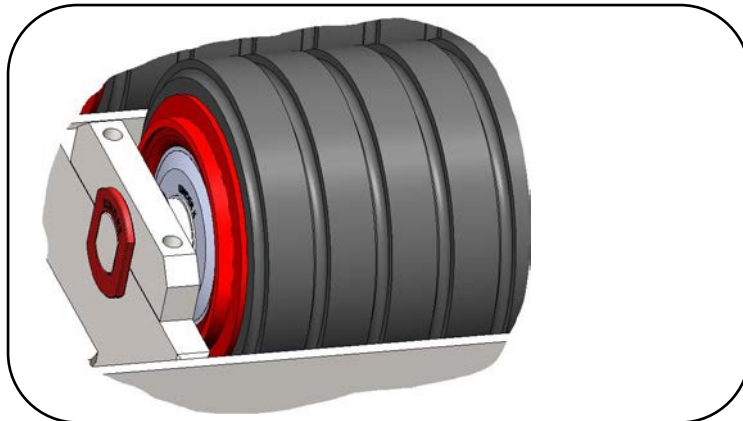
Slide the Polyurethane bush off the shaft to replace it.



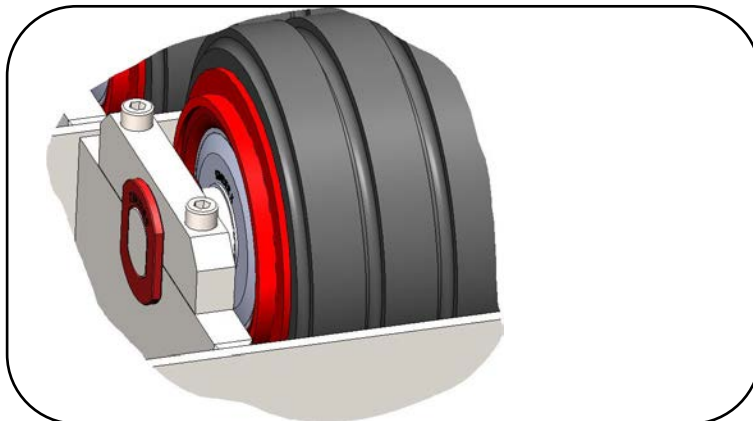
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With the Polyurethane bushes installed, insert the roller back into the frame.



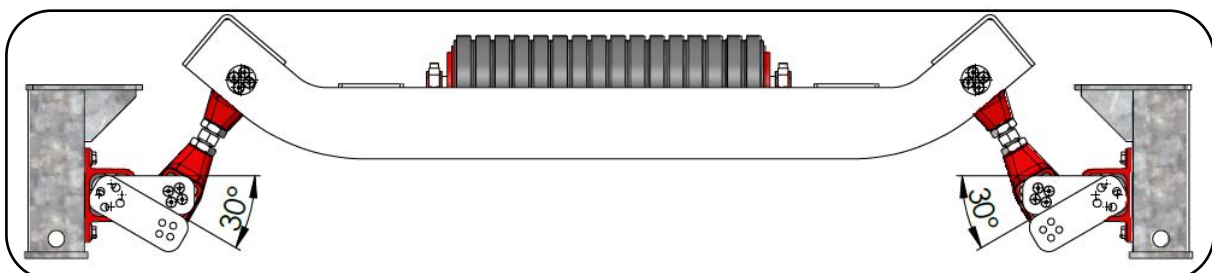
Place the roller retainer cap over the bushes.



Screw the M8 bolts back into place and Torque them to **40Nm\***.

### Torsion Spring:

The Torsion springs need replacing when the outer torsion spring is going past 30° on impact as demonstrated below:



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